



Ecosystem Management Program BULLETIN



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RARE SNAILS DISCOVERED NEAR KAWAIILOA TRAINING AREA. On May 5, 2005 Army Natural Resource Staff (NRS) on O'ahu made a significant discovery in the Ko'olau Mountains. *Achatinella bulimoides*, an endangered kähuli tree snail only found in the Ko'olau Mts. of O'ahu, was thought to be extinct. This species was last seen in the Ko'olau Mountains in 1985. Direct predation from introduced rat species and the predatory snail, *Euglandina rosea*, threaten this species. The Army NRS are very excited about the discovery and the chance to bolster the number of this species through active management. The two individuals were collected and deposited with Dr. Mike Hadfield at the University of Hawai'i, who will propagate the species for return to the wild.



Achatinella bulimoides, kähuli tree snail

HIDDEN HEIAU REDISCOVERED AT SCHOFIELD BARRACKS WEST RANGE. On December 30, 2004 a group of Kupa Ka'aina

Kahunana members conducted a survey in the Schofield Barracks impact area, believed to contain the Hale'au'au Heiau. This particular heiau had not been documented since the 1930's and represents an important find for the Hawaiian community. The cultural monitors located the heiau on a hill, up slope in the direction of a natural "gateway" to the mountains. The massive structure and location of this feature on an isolated hilltop seemed to match McAllister's 1930 description of the heiau. A prescribed fire was successfully carried out in the Schofield Barracks impact area during the month of April, which cleared the dense overgrowth of grasses around the heiau. This will enable the cultural and archaeological monitors to better survey the area and gain a more in depth understanding of the size and importance of this site.



View of Hale'au'au Heiau in Schofield Barracks Impact Area

ARMY HELPS FIGHT FIRE IN NĀNĀKULI. On May 11, 2005, a brush fire started in Nānākuli near Lyman Ranch. The fire burned throughout the day and although it was thought to be contained by 7 pm that night, it flared up later that night, consuming much of the area between Nānākuli and Lualualei. By Thursday morning, the fire had crossed the ridgeline between Nānākuli and Lualualei.

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US Army Garrison, Hawai'i. For additional information, call Ms. Michelle Mansker at (808) 656-2878.

The Pu'u Palikea area, located near the ridge crest in the back of Nānākuli Valley is home to over 100 individuals of the endangered tree snail, *Achatinella mustelina*, and four listed plants species, *Cyanea grimesiana* ssp. *obatae*, *Hedyotis parvula*, *Hesperomannia arbuscula*, and *Plantago princeps* var. *princeps*, and the site of the Army's 2005 Earth Day field event. The land is owned by the James Campbell Estate and managed by The Nature Conservancy of Hawai'i as Honouliuli Preserve.



Achatinella mustelina, kāhuli tree snail

The snails and plants at this site are also managed by the Army as part of the mitigation measures meant to reduce the effects of military training at Mākua Military Reservation (MMR) on listed species. These populations are integral to the ultimate goal of reaching stabilization for these species. Stabilization is a term used in the Mākua Implementation Plan, a comprehensive natural resource management plan developed for MMR species. Stabilization of each species includes increasing the numbers of individuals within a pre-selected number of populations (three for plants and 8 for snails) to a level that ensures their long-term survival and helps

with the overall recovery of the species. Stabilization also entails managing all the outside threats to the populations such as feral pigs, goats, and sheep; non-native plants; non-native mammals and invertebrates; threats to the populations caused by loss of genetic diversity by the decrease in the numbers of plants in the wild; and overall ecosystem health issues. The management of these ecosystem level threats will benefit all native species in the areas, not just those that are federally listed.



Cyanea grimesiana ssp. *obatae*, Hāhā

On May 12, 2005 the Army contracted a helicopter and crew to perform airborne water drops around the sensitive area. In addition, a number of Army natural resource biologists hiked into the management unit on Thursday to help representatives from The Nature Conservancy (TNC) clear vegetation to reduce the fuel load around this sensitive habitat. Although the fire was considered contained as of Friday, May 13th, it reignited over the weekend and was not extinguished until Tuesday, May 17th, scorching a total of 2,500 acres in Nanakuli Valley. The good news is that all our efforts paid off, as none of these precious rare natural resources were lost!



View of Puu Palikea

ARMY PARTNERS WITH NĀNĀKULI HIGH AND INTERMEDIATE SCHOOL.

During November and December 2004, students from the eighth and ninth grade classes of Nānākuli High and Intermediate School (NHIS) participated in field visits to Mākua Military Reservation (MMR). The purpose of the trips was to reinforce the information the students received in classroom presentations regarding Environmental Sciences.

Presenters included Joel Narusawa with Water Quality, Lasha Salbosa and David Palumbo from Natural Resources, and Carly Antone and Alton Exzabe of Cultural Resources, who spoke about their responsibilities as part of the Army Environmental Division and gave students a chance to conduct hands-on field activities. The activities included outplanting, lithics as expression (petroglyphs), archaeology as a mirror of the environment, global positioning systems, and water quality testing.

The students had a wonderful time at MMR and gained confidence and respect for the US Army for managing natural and cultural resources, which many of them are directly connected to as Native Hawaiians.

ARMY HOLDS PUBLIC OPEN HOUSES AT MĀKUA MILITARY RESERVATION.

During the fall of 2004 the Army held open houses at Mākua Military Reservation (MMR) to give the public an opportunity to learn about the management activities taking place at MMR. Representatives from the Cultural Resources, Natural Resources, Compliance, Restoration, Fire and Safety, and Range Control offices were on-hand to give brief presentations



Alton Exzabe leads a petroglyph discussion

regarding their work for the installation and to answer any questions.

Some of the management activities that the public may not be aware of include: protection of the cultural resource sites at MMR, of which there are over 100; cultural public access on a bimonthly basis; clearance of unexploded ordinance for future cultural resource surveys; and natural resource management activities that total millions of dollars per year and include protection of the endangered bird, O'ahu 'Elepiao, the endangered snail, *Achatinella mustelina*, and over 30 listed endangered plant species.

The guests in attendance were impressed at the Army's commitment, and pleasantly surprised at the condition of the valley itself. Overall, the MMR's visitors were extremely flattered and appreciative of the Army's offer to enter the Reservation.



Bill Roome from the Public Affairs Office talks to community members

CULTURAL MONITORING PROGRAM

UNDERWAY by George MacDonell. Schofield Barracks lies in the center of a landscape that is very important to Native Hawaiians. Approximately 500 years ago, the first ruling center of a united O'ahu was located in Līhu'e, in what is now the vicinity of Schofield Barracks. The birthing site and religious center at nearby Kūkaniloko was reserved for the birth of the most special of ali'i. Those born at the site were considered ho'āli'i and were given god-like deference. The surrounding area (including Schofield Barracks) was considered to be land reserved for those with special privileges. In addition, Mount Ka'ala and the surrounding plains and topographic features (Kalena, Pulee, Popouwela, Halemano, Wahiawā and Maunauna) all figure prominently in the legends and mo'olelo of central O'ahu. Recognizing this fact, the Army is working with cultural monitors to identify and avoid impacts to areas of traditional importance to Native Hawaiians. The Cultural Monitoring Program for Army projects has been underway since September 2004 and currently includes 20 cultural monitors for the Schofield area. A similar group of 10 monitors has been created for projects at Pōhakuloa Training Area. The O'ahu cultural monitors are known collectively as Kahunana. A majority of the members were identified through the Wahiawā Civic Club and were selected for their cultural affiliation with the area. The group has a deep knowledge of traditional site types, native plants, appropriate cultural protocols and traditional burial practices. They are also able to represent the community and communicate with the Army on behalf of Native Hawaiians. Their presence on the various job sites provides additional assurances to the community that properties of traditional religious and cultural importance are being properly treated.

In the field, the cultural monitors inspect excavated areas (trenches, soil borings, shovel pits, bulldozer push, etc.), establish barriers around sites, document soil stratigraphy, and collect samples or isolated artifacts. They also identify sites that may otherwise be overlooked and provide insight and recommendations on site treatment and protection. If human remains are inadvertently discovered during any project they will assist in the protection and consultation process. Kahunana have been very productive in identifying sites, interpreting sites, and



Cultural Monitor Hard at Work in South Range Acquisition Area

locating areas identified through oral history, mo'olelo, and stories. Their guidance was critical in the relocation of Hale'au'au Heiau.

ARMY HIRES TNC LIASON to help manage species that are common to both TNC's Honouliuli Preserve and Makua Military Reservation. Mike Walker began work as a Senior Natural Resource Management/TNC Specialist with the Army's O'ahu Program in April 2004. Mike serves as a liaison between the Nature Conservancy's O'ahu Program Staff and Army Natural Resource Staff regarding work planned under the Mākua and O'ahu Implementation Plans. Mike has a B.S. in Forestry and Natural Resource Conservation from the University of Florida. Mike worked at Haleakalā National Park and with the Maui Invasive Species Committee prior to coming to work with us. He has expertise in Geographic Information System and database operation and management. Mike's largest project since coming aboard has been to prepare an Environmental Assessment and Conservation District Use Permit Application for Honouliuli Preserve. Mike's experience and great sense of humor make him a pleasure to work with. Welcome aboard Mike!

INTRODUCING OTHER NEW MEMBERS OF THE O'AHU NRS:

Lauren Weisenberger
Lauren began work with our program as a Propagule Management Specialist in January 2005. Lauren received her M. S. in Botany from the University of Hawai'i at Mānoa and a B.S. in Environmental Science and Biology from Muhlenberg College in Pennsylvania. Lauren was born and raised in Pennsylvania. She moved to Hawai'i for graduate school and following graduation got a job at the Lyon Arboretum working in the Seed Conservation Laboratory. She has worked



Mike Walker performing alien species control in TNC's Honouliuli Preserve

with Alvin Yoshinaga at the Seed Lab for over two years, specifically on Army propagules. A propagule is any part of a plant that can be used for growing another plant such as a cutting, a seed or an air layer. Lauren is expert at testing seeds for dormancy, conducting seed germination trials, preparing seeds for storage and managing the seed storage database that is used to track information on seeds. Lauren's knowledge and contribution to the Army's program is critical for the Army to meet our back-up storage requirements from Section 7 Consultations. Welcome aboard Lauren!



Lauren Weisenberger at Mt. Ka'ala, O'ahu

ARMY TO HIRE A MONITORING PROGRAM MANAGER AND A FENCING CREW SUPERVISOR: The O'ahu Army Natural Resource Program currently has two positions open through the

Research Corporation of the University of Hawai'i (RCUH). The job announcements can be accessed by visiting the RCUH web site at: <http://www.rcuh.com/> and selecting the link for employment and the link for job announcements. The job ID number for the fencing crew supervisor is #25245. The Natural Resource Fence Supervisor will be responsible for planning, designing and constructing ungulate exclosures, and hiring, supervising, and directing personnel involved in clearing, constructing and maintaining ungulate enclosure fence lines. The job ID number for the Monitoring Program Manager is #25244. The Monitoring Program Manager will be responsible for developing monitoring protocols for rare and endangered species, weed distribution and change, and ecosystem health. It is very important that the person hired for this position have a strong background in statistics as it relates to the field of natural resource management. The full description for both positions can be found on the RCUH website. Both jobs close on June 17, 2005.

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